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UNITED STATES DEPARTMENT of AGRICULTURE

INVENTORY
of
POTENTIAL and EXISTING
UPSTREAM RESERVOIR SITES
HUDSON STUDY AREA



U.S. DEPARTMENT of AGRICULTURE
Soil Conservation Service
Economic Research Service
Forest Service

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JUN 28 1976

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In cooperation with the

MASSACHUSETTS WATER RESOURCES COMMISSION

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FOREWORD

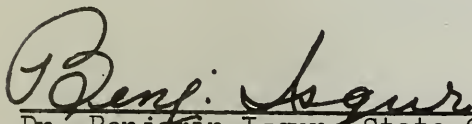
The United States Department of Agriculture, in cooperation with the Massachusetts Water Resources Commission, is participating in the Massachusetts Water Resources Study of the water and related land resources of the Commonwealth. One phase of the study is the inventorying of potential and existing upstream reservoir sites.

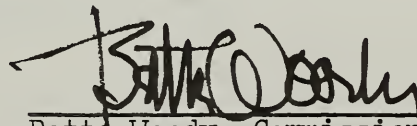
The Commonwealth of Massachusetts, through the Water Resources Commission, provides guidance and significant financial contribution toward this phase of the Massachusetts Water Resources Study. The Massachusetts Water Resources Commission, to fulfill its responsibilities under Chapter 21, Sections 8 through 15 of the Massachusetts General Laws, requires technical and engineering data and information on potential upstream reservoir sites. The Department of Agriculture is participating in this study under the provisions of Section 6, of the Watershed Protection and Flood Prevention Act (Public Law-566, 83rd Congress, as amended) which authorizes the Secretary of Agriculture to cooperate with other federal, state and local agencies, in surveys and investigations of the watersheds of rivers and other waterways as a basis for the development of coordinated programs.

This report, prepared by the Soil Conservation Service and submitted by the USDA Field Advisory Committee to the Water Resources Commission, identifies and inventories potential and existing upstream reservoir sites within the Hudson Study Area.

The Massachusetts Water Resources Commission will use this report, together with other reports and studies prepared by the United States Department of Agriculture and others, in the preparation of a comprehensive plan for the Commonwealth's water and land resources.

The information and data contained herein will also assist local, state and federal agencies in their specific planning activities for the coordinated and orderly conservation, development, utilization and management of the water and land resources to meet the rapidly expanding needs.


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JUN 8 - 1968

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Board of Supervisors
Berkshire Conservation District

Department of Civil Engineering
University of Massachusetts

Division of Water Pollution Control
Massachusetts Water Resources Commission

Massachusetts Department of Natural Resources

Soil Conservation Service personnel prepared this report. Ernest Richards was responsible for the development of the engineering phases of the report. Raymond Curran and Chester Konieczny collected and processed basic site data. Donald Mills reported on geological conditions. Doris Butts typed the final manuscript. James Wesoloski was responsible for editing and publication.

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
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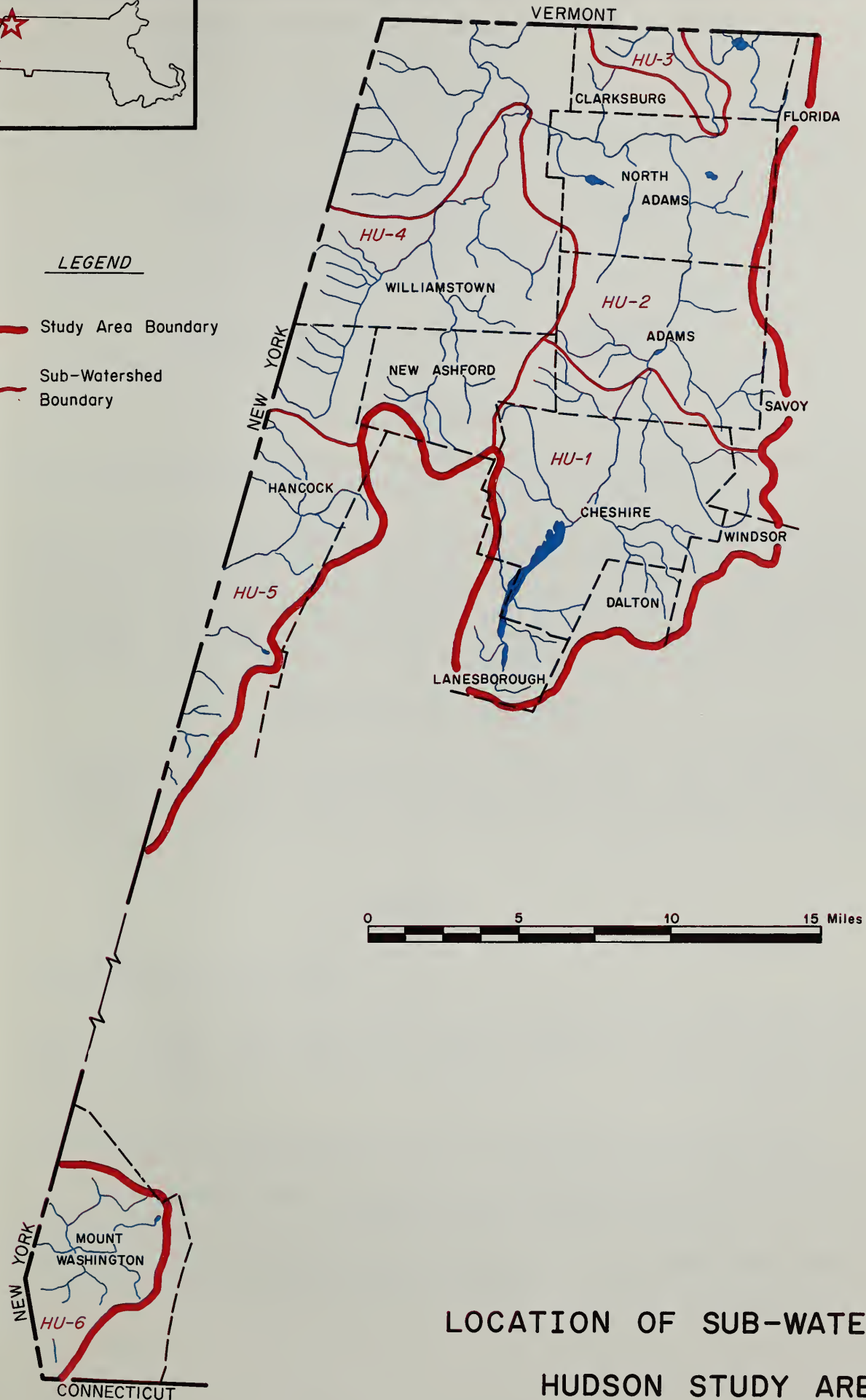
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LEGEND

-  Study Area Boundary
-  Sub-Watershed Boundary



LOCATION OF SUB-WATERSHEDS
HUDSON STUDY AREA

MASSACHUSETTS

INVENTORY OF
POTENTIAL AND EXISTING UPSTREAM RESERVOIR SITES
in the
HUDSON STUDY AREA

prepared by the
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

in cooperation with the
MASSACHUSETTS WATER RESOURCES COMMISSION

INTRODUCTION

This report presents data on 34 potential and 15 existing reservoirs in the Hudson Study Area in Berkshire County, Massachusetts.

Many of the potential reservoirs could be developed as municipal water supplies, recreation lakes, fish and wildlife areas, or floodwater retarding structures. The inventory can be used by the state, municipalities, planning boards, conservation commissions, other units of government, and private individuals in determining the best use for the limited number of potential reservoir sites in the study area.

DESCRIPTION OF STUDY AREA

The Hudson Study Area includes the drainage areas in Massachusetts which ultimately flow into the Hudson River in New York. The study area, which covers about 129,200 acres or 202 square miles, is divided into six sub-watersheds. All or portions of 14 towns are located within the study area.

CRITERIA

Potential Reservoir Sites

The primary considerations used to identify potential reservoir sites were: suitable topography for a dam and reservoir, sufficient drainage area to maintain the proposed reservoir and a relatively undeveloped reservoir area.

The following criteria were used as a guide in site selections:

1. Drainage area -- larger than one-half square mile, but not greater than 50 square miles.
2. Ratio of drainage area to beneficial pool area--not less than 10 to 1.

3. Minimum beneficial pool depth -- 7 feet at the dam.
4. Minimum beneficial pool area -- 10 acres.
5. Minimum beneficial pool capacity -- 100 acre-feet.
6. Maximum beneficial pool capacity -- storage volume equal to 25 inches of runoff from the drainage area.
7. Maximum height of dam - 100 feet.
8. Pool area relatively undeveloped -- no housing developments, industrial areas, or major highways inundated.

In 1968, the Soil Conservation Service prepared a report entitled, "A Study of Potential Reservoir Sites in Massachusetts - Hudson River Basin." This report became one of the first in this series of publications inventorying reservoir sites in the state. The study, which was financed by the Massachusetts Water Resources Commission, located 35 potential sites. Because of the many improvements in criteria, methods, and presentation format, the 1968 study was updated. Thirty-four of the original 35 sites are presented in this report. One site was dropped from the inventory because of recent development in the area.

Existing Reservoirs

Existing reservoirs were located using the 7½ minute U.S. Geological Survey (USGS) quadrangle sheets that cover the study area. Two criteria were used to determine sites to be included in this report:

1. Surface area -- at least 10 surface acres or a pond identified by name on the USGS topographic map.
2. Man-made dam -- The pool must be the result of dam construction. Natural ponds and beaver dams are excluded.

INVESTIGATIONS AND ANALYSES

Potential Reservoir Sites

Sites were located using the latest available USGS 7½ minute quadrangle sheets. Natural basins, or topography favorable for storage of water, and an undeveloped pool area were the primary considerations in the initial site selection. Watershed boundaries were delineated on the quadrangle sheets and the drainage area was determined for each site. Water storage areas and volumes available upstream of the site centerline were calculated. Data were also obtained to calculate the volume of earthfill required for the dam and any supplementary dikes that might be needed to maintain a reservoir.

At each site a field reconnaissance was made that included an inventory of land and facilities (man-made structures) that would be affected if a dam and reservoir were developed at the site. If it was determined that the reservoir would flood extensive man-made facilities, or a study of the elevation-area storage data showed that the site did not meet criteria for the study, the site was dropped from further consideration.

A surficial geologic investigation was made of each potential site to determine any obvious geologic conditions that might affect the water-holding capability or require extensive foundation preparation. A preliminary geological report was prepared which outlined the types of materials that might be expected at the site and their effect on construction costs and waterholding capabilities for the site. The report of geologic conditions was based on the geologist's interpretation following the surficial investigation of the site and surrounding area. No borings were made and subsurface conditions may vary from those indicated in this report.

Hydrologic and hydraulic data were calculated using methods developed by the Soil Conservation Service. Rainfall data were obtained from Technical Papers 40 and 49, U.S. Department of Commerce, Weather Bureau. Preliminary structure site analyses for several levels of development for each site were processed by computer, using a program which determines the most economical type of principal spillway; determines the runoff and peak flow for the 100-year frequency, 10-day duration, principal spillway design storm; routes the design storm to set the emergency spillway crest; performs other routings to determine the design high water and top of dam elevations; calculates embankment yardage and other construction quantities; determines the total estimated cost of the reservoir; and calculates "safe yield" for water supply purposes.

Existing Reservoirs

An inventory was made of 15 existing reservoirs. An engineer made a field reconnaissance to determine the physical condition of each structure and to assess the potential for expansion of the reservoir. While at the site, photographs were taken and are included in this report. Ownership and use information for the reservoirs was obtained from records of the Massachusetts Department of Public Works, the Massachusetts Water Resources Commission and from local interviews.

COSTS

Preliminary cost estimates for potential reservoir sites were based on construction costs and land values as of 1974. The cost estimates include: (1) construction costs; (2) contingencies; (3) engineering and administrative services necessary for surveys, geology, final design, and construction inspection; (4) cost for land required for the reservoir and construction of the dam and spillway; and (5) costs associated with purchase or relocation of man-made facilities affected by the constructed reservoir.

Construction costs were based on recent dam construction contract costs in Massachusetts. A factor for contingencies, equal to 15% to 35% of the construction cost, was included to account for items that were not considered at this intensity of study. Engineering and administrative services ranged from 20% to 40% of the construction costs.

Costs for land acquisition were based on an evaluation of current real estate transactions and market conditions. Land with potential for development was valued at from \$1,000 to \$10,000 per acre; land with little development potential was valued at from \$200 to \$500 per acre. Land values also varied from site to site based on the proximity to developed areas and highways, development taking place in the area, and suitability for development. Land needed for the dam, spillway and design high water pool was included in the land acquisition cost.

Cost estimates are presented on the basis of a cost per acre-foot of storage and cost per surface-acre to provide a comparison between different sites and different levels of development at the same site. Costs are preliminary estimates; firm cost estimates for any site can be determined only after completion of detailed geologic and engineering investigations, final structural designs, and land appraisals.

No cost estimates are included for existing reservoirs.

REPORT FORMAT

The report is divided into sections based on the six subwatersheds in the Hudson Study Area. The location map, placed after the Table of Contents, outlines the area covered by each subwatershed.

A Municipal Index has been prepared to enable local residents to more easily locate sites within their town.

The Municipal Index of Sites lists the site identification numbers for potential and existing reservoir sites within each municipality and the page number of this report on which data are recorded.

Each subwatershed section provides Site Data for the potential and existing reservoir sites, located within the subwatershed, which are included in this report.

Potential Reservoir Sites

Data for potential reservoirs are presented in the following format:

Location: include a narrative description of the location of the site by reference to nearby roads, railroads, or other physical landmarks. In addition, the latitude, longitude, and USGS quadrangle sheet name are provided for more accurate location.

Facilities describes any man-made facilities that would be flooded by
 Affected: a reservoir at the potential site. The elevation of existing facilities was estimated during the engineer's field reconnaissance with the aid of the USGS quadrangle sheets.

Geologic provides a summary of the preliminary geologic report. The
 Conditions: material in the abutments (the valley sides) and the foundation (the valley floor) is described. An estimate is made of the depth and probable type of bedrock. The availability of fill material for dam construction is noted.

Possible leakage problems are indicated and the waterholding capability of the site is subjectively described as "good," "fair," or "poor." The waterholding capability statement is based on the geologist's interpretation of the surficial conditions observed during the field reconnaissance.

Engineering provides information which should be helpful in preliminary
 Notes: design of a dam. One of the abutments is recommended as the location for an excavated emergency spillway. If an excavated emergency spillway is unable to carry the required flows at safe velocity, the need for a concrete emergency spillway is noted.

Public

Ownership: indicates that some portion of a reservoir site is located on land owned by a governmental or quasi-public unit.

Sites which meet study criteria have been analyzed using a computer program which develops preliminary structure site analyses for several levels of development. Results of the computer program are presented in the tables entitled, "Summary Data for Potential Upstream Reservoir Sites" at the end of each subwatershed section. Two information lines contain data on site drainage area, USGS quadrangle name on which the site is located, latitude and longitude of the site, site rating, stream water quality, and principal spillway design storm runoff and peak flow. The site rating is based on geologic conditions and the expected waterholding capability. Sites are given one of the following ratings:

1. Suited for deep permanent storage (over 10 feet in depth).
2. Best suited for shallow water storage (3 to 5 feet maximum depth).
3. Best suited for temporary storage (e.g., floodwater and sediment storage).

In order to furnish the most data for potential reservoir sites, each site was considered to be suitable for deep permanent storage (rating "1") for purposes of design and analyses. The rating for any site could change based on detailed geologic investigations.

Stream water quality ratings are based on classifications assigned by the Division of Water Pollution Control, Massachusetts Water Resources Commission, and published in "Water Quality Standard," June 1967, and are as follows:

- "Class A -- Waters designated for use as public water supply in accordance with Chapter 111 of the General Laws. Character uniformly excellent.
- Class B -- Suitable for bathing and recreational purpose including water contact sports. Acceptable for public water supply with appropriate treatment.
Suitable for agricultural, and certain industrial cooling and process uses; excellent fish and wildlife habitat; excellent aesthetic value.
- Class C -- Suitable for recreational boating; habitat for wildlife and common food and game fishes indigenous to the region; certain industrial cooling and process uses; under some conditions acceptable for public water supply with appropriate treatment. Suitable for irrigation of crops used for consumption after cooking. Good aesthetic value.
- Class D -- Suitable for aesthetic enjoyment, power, navigation, and certain industrial cooling and process uses. Class "D" waters will be assigned only where a higher water use class cannot be attained after all appropriate waste treatment methods are utilized."

The Summary Data for Potential Upstream Reservoir Sites tables also contain data for as many as six possible levels of development at each site. Elevations of the beneficial pool, emergency spillway crest, design high water, and top of dam are shown along with pertinent storage volumes, surface areas and depths. Total cost expressed in dollars per acre-foot of storage and dollars per surface-acre are provided to aid in comparison of levels of development. The emergency spillway type which was used in the preliminary design is indicated by an emergency spillway type code explained in the table notes.

These tables are photo-reductions of the computer output sheets. Elevations are shown to the tenth of a foot and costs to the nearest \$10, but are not to be considered that accurate because of the limited investigations made with preliminary data. All the Summary Data Tables are based on preliminary reconnaissance-type investigations and computer-produced structure designs. Additional detailed engineering, geologic and design investigations must be made before final site selection, land acquisition and final design would be practical.

Estimated safe yields for each potential reservoir are also shown on the tables and were based on information extrapolated from data developed by the late Professor G. R. Higgins of the University of Massachusetts. These estimated safe yields are based on a 95% chance, or the minimum yield that could be expected 19 years out of 20 -- taking into consideration reservoir storage-volume and expected runoff. These data do not consider evaporation, seepage, or prior upstream commitments.

The Committee on Rainfall and Yield of Drainage Areas of the New England Water Works Association has recommended a figure of 600,000 gallons per day per square mile as a maximum economically feasible safe yield. Data for some of the potential sites in this report show a safe yield above 600,000 gallons per square mile per day. These higher values are useful to define the upper portion of a discharge-storage curve for preliminary analysis. For detailed evaluation of a potential site or water supply purposes, the recommendation of the New England Water Works Association should be considered.

Existing Reservoirs

Data for existing reservoirs are presented in the following format:

Location: of the dam is indicated by reference to nearby roads, railroads, or other physical landmarks. The appropriate USGS quadrangle sheet, latitude, and longitude are provided for more accurate location.

Physical data (reservoir area, surface area, height of dam, and drainage area) were estimated from the quadrangle sheet and by field reconnaissance.

Potential
for

Expansion: is estimated and any major man-made facilities which would be affected by an enlarged reservoir are noted. Some of the site narratives contain the phrase, "Significant expansion does not appear practical." The phrase is used to indicate that although the reservoir level might be raised by a few feet or the reservoir area increased by a few acres, any greater expansion does not appear feasible due to topography or facilities which would be flooded.

In some instances, the drainage area of the reservoir does not meet the criteria requiring a 10 to 1 drainage area to reservoir area ratio, below which there may be relatively high evaporation losses. An increase in reservoir surface area might increase evaporation losses to a point where the reservoir could not be maintained during the summer months. These situations are indicated by the statement, "The small drainage area limits expansion potential."

Remarks: includes a description of the dam and spillway system. Construction materials, spillway type and size, and condition of the structure are noted.

Ownership
and

Use: is indicated, if available. In some cases, the reservoir is not maintained for a specific purpose, but may have incidental use for recreation. This is probably the situation for existing reservoirs which are indicated in the Massachusetts Department of Public Works records as being used to "store water." Typical of these sites are old mill reservoirs which are no longer utilized for mill power.

Selected photographs of existing dams, spillways, and reservoirs are included in the report.

MAPS

Individual subwatershed maps appearing at the end of each section indicate the location of the potential and existing reservoir sites in that subwatershed. The maps are reductions of mosaics prepared from 7½ minute USGS quadrangle sheets (1" = 2000' scale). The quadrangle sheets used and publication dates are listed on the maps. Potential sites are indicated with a red rectangle surrounding the site number. Existing reservoirs are identified by a red circle surrounding the site number.

HUDSON STUDY AREA

SITE DATA FOR

Subwatershed HU-01, Hoosic River

This subwatershed includes the drainage area of the Hoosic River upstream from the USGS stream gage located east of Route 8 in Adams, Massachusetts. The subwatershed covers about 30,000 acres in Adams, Cheshire, Dalton, Lanesborough, New Ashford, Pittsfield, Savoy, and Windsor; all in Berkshire County.

The major stream in the subwatershed is the Hoosic River which originates at Cheshire Reservoir and flows north to the subwatershed limit at the stream gage in Adams. The main tributary streams are Dry Brook, McDonald Brook, Kitchen Brook, and Bassett Brook.

Elevations in the subwatershed range from 3,240 feet in the Mount Greylock State Reservation to 850 feet at the USGS stream gage in Adams.

Twelve potential reservoir sites and two existing reservoirs were studied.

POTENTIAL SITE HU-0101

Location: On an unnamed tributary to Dry Brook, between Wells Road and Harbor Road, about 1300 feet upstream from its confluence with Dry Brook in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°35'37" Longitude: 73°07'30"

Facilities	Facility	Elevation
Affected:	Wells Road and utilities	1125
	Harbor Road and utilities	1138
	Mobile home and garage	1145
	2 houses	1145
	2 houses	1150

Geologic Conditions: The right abutment is glacial outwash underlain by limestone. The left abutment is glacial till with some gravels. The valley floor is glacial outwash. Depth to limestone bedrock in the foundation is estimated to be about 15 to 20 feet. Waterholding capabilities appear to be fair. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0102

Location: On Penniman Brook about 1600 feet upstream from North Street (State Route 8), in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°35'00" Longitude: 73°09'12"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Underground gas line	1065

Geologic Conditions: Both abutments are poorly graded sand and gravel (glacial outwash terrace deposits) and shallow to schist or limestone bedrock. The valley floor is filled sediments, and swampy in the foundation area. Depth to schist bedrock in the foundation is estimated to be about 10 to 15 feet. Water-holding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0103

Location: On Dry Brook at Sand Mill Road in Cheshire, Massachusetts.

Windsor, Mass. USGS quadrangle

Latitude: 42°35'08" Longitude: 73°06'38"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Sand Mill Road and utilities	1168
	2 houses	1190
	House, 3 barns	1195
	2 houses	1200
	House	1210
	House	1215
	5 mobile homes	1220

Geologic Conditions: Both abutments are glacial till underlain by schistose bedrock. Bedrock is exposed in the valley floor. Waterholding capabilities appear to be good. There may be some seepage through sand and gravel deposits in the right abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. Preliminary structure designs indicate that a concrete chute emergency spillway may also be required at this site.

POTENTIAL SITE HU-0104

Location: On Thunder Brook about 1050 feet downstream from Lanesboro Mountain Road in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°33'48" Longitude: 73°10'55"

	<u>Facility</u>	<u>Elevation</u>
Facilities	House	1320
Affected:	Lanesboro Mountain Road	1320
	West Mountain Road and utilities	1325
	2 houses, 2 barns	1330
	Mobile home	1330
	House	1350
Geologic	Dairy barn	1355

Conditions: The left abutment is stratified sand and gravel with some thin silt lenses and bedrock. The right abutment is glacial till with bedrock at higher elevations. Schist bedrock is just below the surface in the valley floor. Waterholding capabilities appear to be good with possible seepage through the left abutment. Borrow material for dam construction was located near the site.

Engineering

Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0105

Location: On McDonald Brook about 6900 feet upstream from its confluence with South Brook in Cheshire, Massachusetts.

Windsor, Mass. USGS quadrangle

Latitude: 42°33'24" Longitude: 73°07'15"

	<u>Facility</u>	<u>Elevation</u>
Facilities	Barn	1290
Affected:	Windsor Road	1305
	Garage	1330

Geologic

Conditions: The left abutment is hard, moderately fractured, tight Cheshire quartzite. The right abutment is silty sand with gravel, cobbles and a few large boulders with a gravel terrace adjacent to the brook. Depth to Cheshire quartzite bedrock in the foundation is estimated to be about 10 feet. Waterholding capabilities appear to be fair to good with possible leakage through the terrace gravels. Borrow material for dam construction was located near the site.

Engineering

Notes: The right abutment is recommended for the excavated emergency spillway location. Preliminary structure designs indicate that a concrete chute emergency spillway may also be required at this site.

POTENTIAL SITE HU-0106

Location: On Dry Brook about 6300 feet upstream from Windsor Road in Windsor, Massachusetts.

Windsor, Mass. USGS quadrangle

Latitude: 42°33'18" Longitude: 73°04'45"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Cottage	1810
	House	1815
	House	1835

Geologic Conditions: Both abutments are glacial till. Borrow material for dam construction was located near the site. Depth to bedrock in the foundation is estimated to be less than 15 feet. Water-holding capabilities appear to be fair to good. There may be some leakage through the foundation. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0107

Location: On Dry Brook about 7400 feet upstream from Windsor Road in Windsor, Massachusetts.

Windsor, Mass. USGS quadrangle

Latitude: 42°33'14" Longitude: 73°04'32"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	House	1835

Geologic Conditions: The right abutment is schistose bedrock overlain by thin silty sand. The left abutment is schistose bedrock overlain by silty sand and gravel, cobbles, and boulders. Depth to bedrock in the foundation is estimated to be less than 5 feet. Water-holding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0108

Location: On South Brook about 1075 feet upstream from Notch Road in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°33'19" Longitude: 73°08'31"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Notch Road and utilities	1090
	House	1100
	Mobile home	1115
	House	1120
	2 mobile homes	1125
	House and barns	1138
	3 mobile homes	1142
	House	1160
	Mobile home and garage	1163
	House	1170

Geologic Conditions: The left abutment is Cheshire quartzite overlain by silty sand and gravel (glacial till). The right abutment is sand and gravel (englacial drift). Depth to quartzite bedrock in the foundation is estimated to be about 5 to 10 feet. Waterholding capabilities appear to be fair to good depending on leakage in the right abutment. Borrow material for dam construction was located near the site.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0109

Location: On South Brook about 2300 feet upstream from Notch Road in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°32'53" Longitude: 73°08'05"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Mobile home and garage	1140
	Notch Road and utilities	1142
	House and garage	1170
	House	1187
	House and barn	1220
	House and barn	1235

POTENTIAL SITE HU-0109 (Continued)

Geologic Conditions: The left abutment is thin glacial till underlain by Cheshire quartzite. The right abutment is silt and silty clay with gravel, cobbles and boulders. Bedrock is exposed in the valley floor in the foundation area. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. Preliminary structure designs indicate that a concrete chute emergency spillway may also be required at this site.

POTENTIAL SITE HU-0110

Location: On Pettibone Brook about 3100 feet upstream from Cheshire Road in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°32'37" Longitude: 73°12'03"

Facilities Facility
Affected: None below elevation 1317

Geologic Conditions: The left abutment is poorly graded sand and gravel with boulders (englacial drift) in discontinuous patches. The right abutment is silty sand with gravel, cobbles and boulders (glacial till) and is shallow to bedrock. Schist bedrock is exposed in both abutments. Schist bedrock outcrops in the streambed. There is a limestone quarry in the pool area. Waterholding capabilities appear to be poor. Leakage is expected through fractured bedrock in the foundation or through cavernous limestones in the pool area. Borrow material for dam construction was located near the site.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0111

Location: On Muddy Brook about 900 feet upstream from Summer Street in Lanesborough, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: 42°30'21" Longitude: 73°12'10"

Facilities	Facility	Elevation
Affected:	Swamp Road	978
	Underground gas line	980

Geologic Conditions: The left abutment at the valley floor is silt and at higher elevations is silt underlain by fine sand with thin gravel. The right abutment is silt with some gravel and cobbles. Probing of the muck and peat in the foundation reveals soft materials to 13 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. The peat material in the foundation is considered too fibrous for displacement and probably would have to be excavated prior to the construction of a dam.

POTENTIAL SITE HU-0112

Location: On an unnamed tributary to Cheshire Reservoir about 600 feet upstream from Gulf Road in Lanesborough, Massachusetts.

Pittsfield East, Mass. USGS quadrangle

Latitude: 42°29'28" Longitude: 73°11'53"

Facilities	Facility	Elevation
Affected:	Gulf Road and utilities	1025
	Mobile home	1040
	House	1045
	House and barn	1055

Geologic Conditions: The left abutment is silty sand with gravel, cobbles and boulders (glacial till). The right abutment is silty sand with gravel, cobbles and boulders (glacial till) with possibly some terrace gravel in the upper 10 feet. The foundations is flood plain deposits about 10 to 15 feet deep. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

STUDY AREA-HUDSON

SUBWATERSHED-HOOSIC RIVER

BENEFICIAL POOL

BENEFICIAL POOL										EMERGENCY SPILLWAY				DESIGN				DAM		SAFE																			
														HIGH WATER						YIELD																			
																				AT 95																			
																				PERCENT																			
																				CHANCE																			
																				FILL																			
																				VOL																			
																				(1000																			
																				CY)																			
																				* (MGD)																			
DA= 1.14 SQ MI = 730 AC										USGS QUAD-CHESHIRE										LATITUDE 42-33-48										LONGITUDE 73-10-55									
STREAM WATER QUALITY (B)										100-YR PRIN SPWY DESIGN STORM										RUNOFF = 8.30 IN, PEAK FLOW =										353 CFS									
SITE RATING (1)																																							
1273.9	0	0.0	1	13.8	*	1321.8	E	423	7.0	1780	*	1324.1	22	*	1329.6	70	185	*	*****																				
1298.6	100	1.6	8	38.7	*	1298.6	T	109	1.7	8340	*	1311.1	14	*	1316.5	56	103	*	0.21																				
1317.6	337	5.5	17	57.6	*	1317.6	T	346	5.6	3440	*	1327.9	25	*	1332.9	73	212	*	0.45																				
1336.8	810	13.2	33	76.8	*	1347.3	E	1219	20.1	1290	*	1349.4	46	*	1353.9	94	469	*	0.73																				
1352.5	1455	23.9	50	92.5	*	1352.5	T	1464	24.1	1470	*	1357.0	55	*	1360.0	100	575	*	0.93																				

SITE-HU-0105

[illegible]

SITE-HU-0106

SITE-HU-0106														
SITE RATING		DA= 2.00 SQ MI = 1280 AC		USGS QUAD-WINDSOR		LATITUDE 42-33-18		LONGITUDE 73-04-45		619 CFS				
		STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM		RUNOFF = 8.30 IN, PEAK FLOW =								
1810.6	0	0.0	3	10.7	* 1836.8 E	689	6.5	530	* 1839.1	79	* 1843.6	44	43	* *****
1824.1	100	0.8	22	24.2	* 1824.1 T	116	1.1	5080	* 1835.8	66	* 1844.6	45	46	* 0.28
1834.6	528	4.9	61	34.5	* 1843.1 E	1201	11.3	440	* 1845.5	99	* 1850.6	51	66	* 0.74
1845.1	1383	13.0	98	7060	* 1851.6 E	2099	19.7	330	* 1853.5	123	* 1858.1	58	103	* 1.26
1856.3	2667	25.0	132	8600	* 1856.3 T	2683	25.2	420	* 1859.8	143	* 1862.8	63	132	* 1.66

NOTES - (1) COSTS ARE BASED ON 1974 S.C.S. DESIGN CRITERIA AND COST DATA.

- (2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
- (3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
- (4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
- (5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

*** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. ***

STUDY AREA-HUDSON

SUBWATERSHED-HOOSIC RIVER

BENEFICIAL POOL

BENEFICIAL POOL										EMERGENCY SPILLWAY		DESIGN		DAM		SAFE	
										* HIGH WATER		* TOP		* FILL		* YIELD	
										* COST		* ELEV		* ELEV		* CHANCE	
										* AT		* TYPE		* AC FT		* (1000	
										* SURF		* DAM		* (MSL)		* (CY)	
										* AC		* (FT)		* (MSL)		* (MGD)	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* IN		* IN		* IN		* IN	
										* PER		* PER		* PER		* PER	
										* STORAGE		* STORAGE		* STORAGE		* STORAGE	
										* ELEV		* ELEV		* ELEV		* ELEV	
										* AT		* AT		* AT		* AT	
										* COST		* COST		* COST		* COST	
										* SURF		* SURF		* SURF		* SURF	
										* AC		* AC		* AC		* AC	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (FT)		* (FT)		* (FT)		* (FT)	
										* (MSL)		* (MSL)		* (MSL)		* (MSL)	
										* IN		* IN		* IN		* IN	
										* AC		* AC		* AC		* AC	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* IN		* IN		* IN		* IN	
										* PER		* PER		* PER		* PER	
										* STORAGE		* STORAGE		* STORAGE		* STORAGE	
										* ELEV		* ELEV		* ELEV		* ELEV	
										* AT		* AT		* AT		* AT	
										* COST		* COST		* COST		* COST	
										* SURF		* SURF		* SURF		* SURF	
										* AC		* AC		* AC		* AC	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (FT)		* (FT)		* (FT)		* (FT)	
										* (MSL)		* (MSL)		* (MSL)		* (MSL)	
										* IN		* IN		* IN		* IN	
										* AC		* AC		* AC		* AC	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* IN		* IN		* IN		* IN	
										* PER		* PER		* PER		* PER	
										* STORAGE		* STORAGE		* STORAGE		* STORAGE	
										* ELEV		* ELEV		* ELEV		* ELEV	
										* AT		* AT		* AT		* AT	
										* COST		* COST		* COST		* COST	
										* SURF		* SURF		* SURF		* SURF	
										* AC		* AC		* AC		* AC	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (FT)		* (FT)		* (FT)		* (FT)	
										* (MSL)		* (MSL)		* (MSL)		* (MSL)	
										* IN		* IN		* IN		* IN	
										* AC		* AC		* AC		* AC	
										* (\$)		* (\$)		* (\$)		* (\$)	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* IN		* IN		* IN		* IN	
										* PER		* PER		* PER		* PER	
										* STORAGE		* STORAGE		* STORAGE		* STORAGE	
										* ELEV		* ELEV		* ELEV		* ELEV	
										* AT		* AT		* AT		* AT	
										* COST		* COST		* COST		* COST	
										* SURF		* SURF		* SURF		* SURF	
										* AC		* AC		* AC		* AC	
										* (AC)		* (AC)		* (AC)		* (AC)	
										* (\$)		* (\$)		* (\$)		* (\$)	

SITE-HU-0110

SITE RATING (3)	STREAM WATER QUALITY (B)	100-YR PRIN	SPWY	DESIGN	STORM	RUNOFF =	8.30 IN.	PEAK FLOW =	597 CFS											
1270.4	0	0.0	2	14.3	*	1309.3	T	427	4.1	2000	*	1314.4	35	*	1319.8	64	76	*	*****	
1290.8	100	1.0	10	8920	34.8	*	1290.8	T	115	1.1	7730	*	1302.6	18	*	1308.4	52	48	*	0.28
1297.9	182	1.7	14	5720	41.9	*	1297.9	T	198	1.9	5270	*	1312.4	32	*	1318.8	63	73	*	0.40
1306.8	347	3.4	24	2530	50.8	*	1306.8	T	362	3.5	2420	*	1314.8	36	*	1319.4	63	74	*	0.58
1312.5	508	4.9	32	1940	56.5	*	1312.5	T	523	5.1	1880	*	1317.1	39	*	1320.1	64	77	*	0.72

 SITE-HU-0111
 SITE RATING (1)
 DA= 1.71 SQ MI = 1094 AC
 STREAM WATER QUALITY (B)
 USGS QUAD=CHESHIRE
 100-YR PRIN SPWY DESIGN STORM
 RUNOFF = 8.30 IN, PEAK FLOW = 529 CFS
 LATITUDE 42-30-21
 LONGITUDE 73-12-10

SITE-HU-0111

SITE RATING (1)	STREAM WATER QUALITY (8)	100-YR PRIN	SPWY DESIGN	STORM	RUNOFF = 8.30 IN.	PEAK FLOW =	52.9 CFS							
973.5	0	0.0	12	1.5 *	983.8 E	548	6.0	570 *	986.0	108 *	990.0	18	34 *	*****
977.3	100	1.1	3580	42	8590	547	6.0	650 *	986.1	110 *	989.4	17	31 *	0.26
979.5	213	2.3	2000	59	7150	773	8.5	550 *	988.0	123 *	991.9	20	40 *	0.41
982.5	438	4.8	1110	83	5860	900	9.8	540 *	989.5	134 *	993.1	21	46 *	0.62
985.0	663	7.3	820	101	5370	1206	13.2	450 *	991.4	145 *	995.0	23	54 *	0.80
986.1	775	8.5	730	109	5200	1353	14.7	420 *	992.1	149 *	996.0	24	58 *	0.87

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*****
SITE-HU-0112
SITE RATING (3)
DA= 0.95 SQ MI = 608 AC
STREAM WATER QUALITY (B)
USGS QUAD-PITTSFIELD EAST
100-YR PRIN SPWY DESIGN STORM
LATITUDE 42-29-28 LONGITUDE 73-11-53
RUNOFF = 8.30 IN, PEAK FLOW = 294 CFS
*****

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SITE-HU-0112

SITE	RATING (3)	STREAM	WATER	QUALITY (B)	100-YR	PRIN	SPWY	DESIGN	STORM	RUNOFF =	8.30 IN,	PEAK	FLOW =	294 CFS
					*				*	*			*	
1023.0	0	0.0	4	3.0	* 1041.3	E	321	6.3	1130	*	1043.6	32	* 1047.6	28
1032.4	100	2.0	17	12.3	* 1044.9	E	433	8.5	1090	*	1047.1	36	* 1051.4	31
1040.6	294	5.8	29	20.7	* 1049.1	E	590	11.6	990	*	1051.4	41	* 1055.0	35
1051.6	683	13.5	42	31.7	* 1058.1	E	992	19.6	850	*	1060.3	53	* 1063.9	44
1059.9	1072	21.2	53	39.9	* 1064.4	E	1327	26.2	800	*	1066.6	58	* 1069.6	50
1062.5	1213	23.9	55	42.5	* 1062.5	T	1220	24.1	980	*	1066.8	58	* 1069.8	50

NOTES - (1) COSTS ARE BASED ON 1974 S.C.S. DESIGN CRITERIA AND COST DATA.

(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE

(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLW

(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.

(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE

CONSIDERED ACCURATE TO THAT DEGREE.

*** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. ***

EXISTING SITE HU-0120 (Cheshire Reservoir)

Location: On the Hoosic River at South Street (State Route 8) in Cheshire, Massachusetts.

Cheshire, Mass. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
970	500	10	9550	14.9

Potential for Expansion: Limited. The reservoir is surrounded by many houses and cottages.

Remarks: The dam is a 40-foot long stone masonry weir having a maximum head of 3 feet. A catwalk traverses the weir and there are 4 gated outlet pipes. The weir has been recently repaired. The dam is well maintained.

Ownership and Use: The reservoir is owned by Arnold Print Works Inc. of Adams and is primarily used for industrial processing water.

EXISTING SITE HU-0121 (Berkshire Pond)

Location: On an unnamed tributary to Cheshire Pond about 50 feet downstream from Old State Road in Lanesborough, Massachusetts.

Cheshire, Mass. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
987	20	15	1100	1.7

Potential for Expansion: Topography limits any significant increase in surface area. The eastern edge of the pond is bordered by the New York Central Railroad and State Route 8.

Remarks: The dam is an old earthfill structure about 50 feet long with a vegetated spillway on the left abutment. A gate-house is located on the right abutment near the toe of the dam.

Ownership and Use: The pond is owned by Arnold Print Works Inc. and is primarily used for industrial processing water.

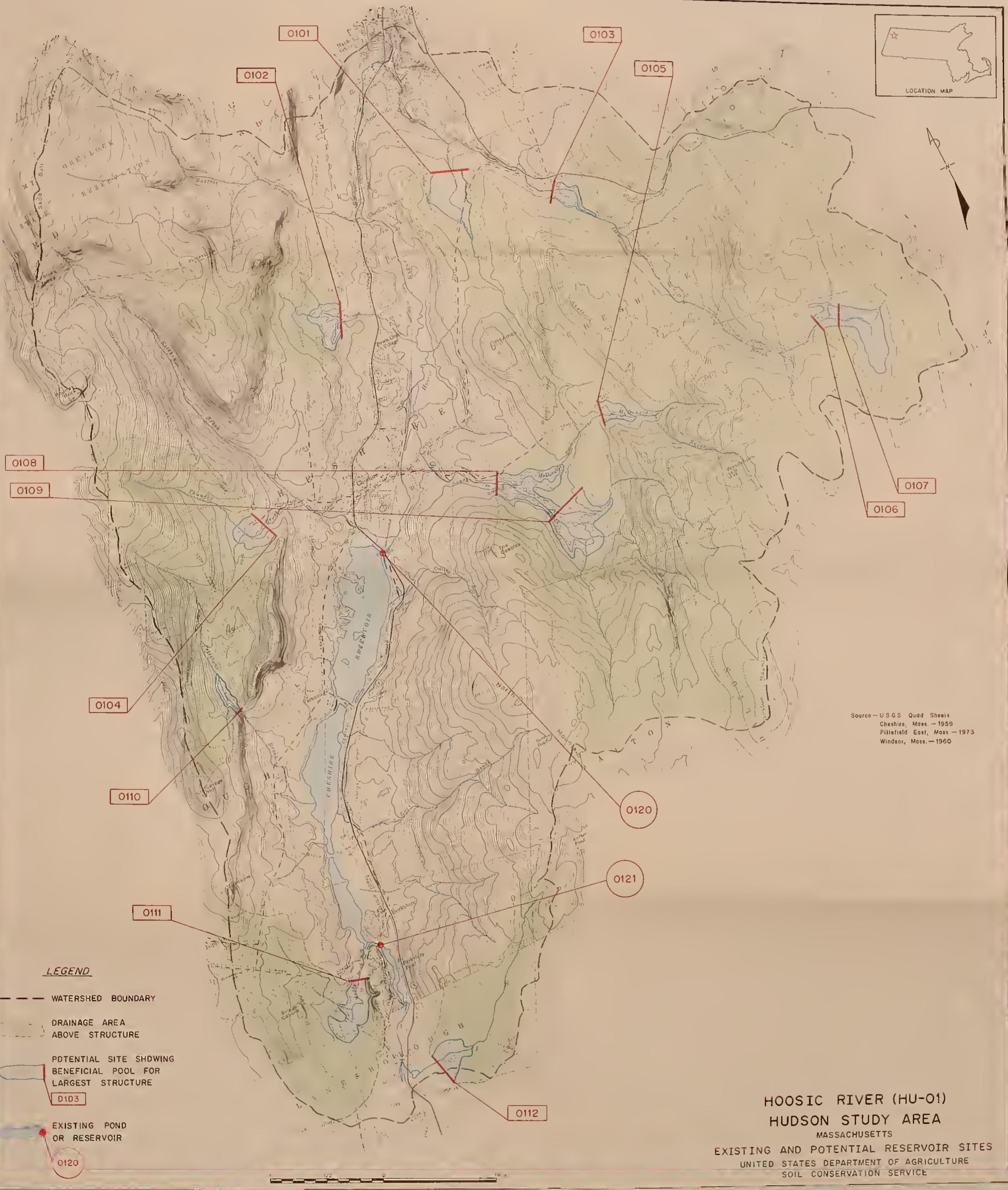
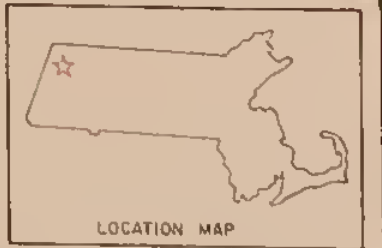


HU-0120
CHESHIRE RESERVOIR



HU-0121
BERKSHIRE POND





LEGEND

--- WATERSHED BOUNDARY

--- DRAINAGE AREA
ABOVE STRUCTURE

POTENTIAL SITE SHDWING
BENEFICIAL POOL FOR
LARGEST STRUCTURE

0103

EXISTING POND
OR RESERVOIR

0120

HOOSIC RIVER (HU-01)

HUDSON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

HUDSON STUDY AREA

SITE DATA FOR

Subwatershed HU-02, Hoosic River

This subwatershed includes the drainage area of the Hoosic River from the USGS stream gage located east of Route 8 in Adams, Massachusetts downstream to the Vermont state line in Williamstown. The subwatershed covers about 46,200 acres in Adams, Cheshire, Clarksburg, Florida, New Ashford, North Adams, Savoy, and Williamstown; all in Berkshire County.

The major stream in the subwatershed is the Hoosic River. The river flows north from the USGS stream gage to North Adams where it turns and flows northwesterly to Vermont. The main tributary streams are the North Branch of the Hoosic, Notch Brook and Hemlock Brook.

Elevations in the subwatershed range from a high of 3,490 feet at Mount Greylock in Adams to about 570 feet at the Vermont line in Williamstown.

Four potential reservoir sites and nine existing reservoirs were studied.

POTENTIAL SITE HU-0201

Location: On Birch Brook about 2500 feet upstream from its confluence with Buxton Brook in Williamstown, Massachusetts

Williamstown, Mass.-Vt. USGS quadrangle

Latitude: 42°31'00" Longitude: 73°14'12"

Facilities Facility

Affected: None below elevation 997

Geologic Conditions: Both abutments are thin ground moraine consisting of soft shale and limey shale and underlain by limey shale and limestone. Depth to bedrock in the foundation is estimated to be about 10 to 15 feet. Waterholding capabilities appear to be poor. Leakage is expected in the limestone and limey shale. Borrow material for dam construction was located near the site, however the quality of the material is questionable because of the soft shale particles that may break up under compaction.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0202

Location: On Beaver Creek about 725 feet upstream from Horrigan Road in Clarksburg, Massachusetts.

North Adams, Mass.-Vt. USGS quadrangle

Latitude: 42°43'46" Longitude: 73°05'32"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	House	1150
	House	1155

Geologic Conditions: Both abutments are thin glacial till or morainal deposits underlain by limestone. Depth to limestone bedrock in the foundation is estimated to be about 15 to 25 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0204

Location: On Notch Brook about 600 feet upstream from West Mountain Road in North Adams, Massachusetts

Williamstown, Mass.-Vt. USGS quadrangle

Latitude: 42°40'20" Longitude: 73°08'10"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	House	1200
	Dog kennels	1200

Geologic Conditions: The left abutment is glacial till or outwash gravel. The right abutment is schist bedrock with limestone. Waterholding capabilities appear to be fair to good. Some leakage is possible through the left abutment. Borrow material for dam construction was located near the site. Please refer to Existing Site HU-0204 (Notch Reservoir) for information on the existing reservoir at this site.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

Public Ownership: The existing reservoir is owned by the city of North Adams.

POTENTIAL SITE HU-0205

Location: On Tophet Brook about 600 feet upstream from Center Road in Savoy, Massachusetts

Windsor, Mass. USGS quadrangle

Latitude: 42°37'06" Longitude: 73°03'56"

Facilities Facility

Affected: None below elevation 2100

Geologic Both abutments are thin glacial till underlain by gneiss bed-
Conditions: rock. Depth to gneiss bedrock in the foundation is estimated to be about 5 to 10 feet. Surficial deposits are valley fill, glacial till and gneiss bedrock. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering The right abutment is recommended for the excavated emergency
Notes: spillway location. There are remnants of an old rock and earthfill dam and an old beaver dam at the site.

EXISTING SITE HU-0203 (Mauserts Pond)

Location: On Beaver Creek about 2000 feet upstream from State Route 8 in Clarksburg, Massachusetts

North Adams, Mass.-Vt. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
1074	50	10	1000	1.6

Potential for Expansion: Raising the existing pond level by 10 feet would more than double the surface area. No facilities would be affected.

Remarks: The dam is a series of earthfill dikes. The spillway system is a concrete ogee weir about 70 feet long having a maximum head of 3 feet. The pond drain is a concrete drop structure with stop logs.

Ownership and Use: The pond is owned by the Commonwealth of Massachusetts, Department of Environmental Management and is used for recreation.

EXISTING SITE HU-0204 (Notch Reservoir)

Location: On Notch Brook about 600 feet upstream from West Mountain Road in North Adams, Massachusetts.

Williamstown, Mass-Vt. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
1246	9	50	1400	2.2

Potential for Expansion: Please refer to Site Data and Design Summary Table for Potential Site HU-0204 for details.

Remarks: The dam is an earthfill structure about 500 feet long with rock riprap below the waterline on the upstream slope. The principal spillway is a 50-foot long weir on the right abutment with provisions for 2 feet of stop logs.

Ownership and Use: The reservoir is owned by the city of North Adams and is used for water supply.

EXISTING SITE HU-0210 (Choquettes Pond)

Location: On an unnamed brook about 2000 feet upstream from State Route 8 in Clarksburg, Massachusetts.

North Adams, Mass.-Vt. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
1105	2	10	50	0.08

Potential for Expansion: Expansion is limited by the small drainage area.

Remarks: The structure is a vegetated earthen dam about 100 feet long. The spillway is a 12-inch metal pipe. Dam and spillway are well maintained.

Ownership and Use: The site is owned by the Commonwealth of Massachusetts, Department of Environmental Management and is used for recreation.

EXISTING SITE HU-0211 (Lower Reservoir)

Location: About 1 mile southwest of the center of North Adams in North Adams, Massachusetts.

North Adams, Mass.-Vt. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
910	0.2	10	1	--

Potential for Expansion: The site is a bypass pond built on a steep slope with no potential for expansion.

Remarks: The dam is an earthfill structure about 300 feet long with dikes on all sides of the reservoir. The reservoir was previously used as a storage facility for water from Notch Reservoir but has been abandoned.

Ownership and Use: The reservoir is owned by the town of North Adams and is no longer used for a specific purpose.

EXISTING SITE HU-0212 (Upper Reservoir)

Location: About 1 mile southeast of the center of North Adams in North Adams, Massachusetts

North Adams, Mass.-Vt. USGS quadrangle

Surface Elevation	Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
1095	1	20	10	.02

Potential for Expansion: The site is a bypass pond built on a slope with no potential for expansion.

Remarks: The dam is an earthfill structure about 800 feet long having a vegetated downstream slope and rock riprapped upstream slope. The reservoir stores water which is pumped from Notch Reservoir.

Ownership and Use: The reservoir is owned by the town of North Adams and is used for water supply.

EXISTING SITE HU-0213 (Windsor Lake)

Location: On a tributary to the Hoosic River about 2800 feet upstream from Ashland Street (State Route 8) in North Adams, Massachusetts.

North Adams, Mass.-Vt. USGS quadrangle

Surface Elevation	Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
959	20	20	150	0.25

Potential for Expansion: The small drainage limits expansion potential. The surface area is already large in relation to the drainage area.

Remarks: The dam is an earthfill structure about 300 feet long with a 15-foot long, 2-foot maximum head, concrete and stone masonry weir on the right abutment.

Ownership and Use: The lake is owned by the town of North Adams and is used for recreation.

EXISTING SITE HU-0214 (Williamstown Reservoir)

Location: About 6000 feet southeast of the intersection of Luce Road and State Route 2 in Williamstown, Massachusetts.

Williamstown, Mass.-Vt. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area</u>	
975	3	30	<u>(Acres)</u>	<u>(Sq. Mi.)</u>
			26	.04

Potential for Expansion: The site is a bypass pond built on a steep slope with no potential for expansion.

Remarks: The dam is an earthfill structure about 500 feet long. Both slopes are vegetated and the dam appears to be well maintained. The principal spillway is a 12-inch metal pipe located at the eastern end of the pool. A gatehouse is located on the western end.

Ownership and Use: The reservoir is owned by the town of Williamstown and is used for water supply.

EXISTING SITE HU-0215 (Mount Williams Reservoir)

Location: On Paull Brook about 1500 feet upstream from Pattison Road in North Adams, Massachusetts.

Williamstown, Mass.-Vt. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area</u>	
1044	48	20	<u>(Acres)</u>	<u>(Sq. Mi.)</u>
			850	1.3

Potential for Expansion: Limited; expansion would require extensive diking along the entire north shore of the reservoir.

Remarks: The dam is an earthfill structure about 500 feet long with rock riprap on the upstream slope. The principal spillway is a 20-foot long concrete chute on the left abutment having a maximum head of 7 feet.

Ownership and Use: The reservoir is owned by the town of North Adams and is used for water supply.

EXISTING SITE HU-0216 (Dean Pond)

Location: On Pecks Brook about 5000 feet upstream from West Road in Adams, Massachusetts.

Cheshire, Mass. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq.Mi.)</u>
1010	1	30	1350	2.1

Potential for Expansion: Poor; topography limits any significant increase in surface area.

Remarks: The dam is a stone masonry structure about 100 feet long. The spillway is a 20-foot long weir in the center of the dam with a maximum head of 3 feet and a fall of about 20 feet. A gatehouse is located on the right abutment.

Ownership and Use: The pond is owned by J. Arnold and is not used for a specific purpose.



HU-0203
MAUSERTS POND



HU-0211
LOWER RESERVOIR

HU-0204
NOTCH RESERVOIR



HU-0210
CHOQUETTES POND



HU-0212
UPPER RESERVOIR





HU-0213
WINDSOR LAKE



HU-0215
MT. WILLIAM RESERVOIR



HU-0214
WILLIAMSTOWN RESERVOIR



HU-0216
DEAN POND





LEGEND

- WATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING POND OR RESERVOIR

HOOSIC RIVER (HU-02)
HUDSON STUDY AREA

MASSACHUSETTS
EXISTING AND POTENTIAL RESERVOIR SITES
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Source - U.S.G.S. Quad Sheets
Berlin, Mass - 1960
Cheshire, Mass - 1959
North Adams, Mass - 1960
Williamstown, Mass - 1960
Windsor, Mass - 1960

LEGEND

--- WATERSHED BOUNDARY

--- DRAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
0300

EXISTING POND OR RESERVOIR



HUDSON BROOK (HU-03) HUDSON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Source—U.S.G.S. Quad Sheets
North Adams, Moss.-Vermont — 1960
Pawnee, Vermont — 1954
Stamford, Vermont — 1954
Williamstown, Moss.-Vermont — 1960

HUDSON STUDY AREA

SITE DATA FOR

Subwatershed HU-04, Green River

The Green River subwatershed covers about 27,100 acres in Adams, Cheshire, Hancock, Lanesborough, New Ashford, North Adams, and Williamstown; all in Berkshire County.

The main streams in the subwatershed are the Green River, East Branch of the Green River, and the West Branch of the Green River. The Green River and the East Branch of the Green River originate in New Ashford; join near the New Ashford - Williamstown line, and flow north to South Williamstown. The West Branch originates in Hancock and flows north to join the Green River at South Williamstown. From South Williamstown, the river flows north to its confluence with the Hoosic River in Williamstown.

Elevations in the subwatershed range from a high of 3490 feet at Mount Greylock in Adams to about 600 feet at the Hoosic River confluence.

In 1971, the Soil Conservation Service prepared a Preliminary Investigation Report under the Watershed Protection and Flood Prevention Act (Public Law 566) for this watershed.

The report concluded that a project was feasible for the Green River. Three potential reservoir sites were identified. Local interest in the watershed project has been slow to develop and planning efforts have been suspended until more local interest is apparent.

Six potential reservoir sites were studied in this inventory. There were no existing reservoirs which met study criteria.

POTENTIAL SITE HU-0401

Location: On the West Branch of the Green River about 2 miles upstream from New Ashford Road in Williamstown, Massachusetts.

Berlin, N. Y.-Mass.-Vt. USGS quadrangle

Latitude: 42°38'33" Longitude: 73°16'06"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	House, garage and barn	995

Geologic Conditions: Both abutments are gravel. The right abutment may be shallow to bedrock. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0402

Location: On the West Branch of the Green River about 5300 feet downstream from Main Road in Hancock, Mass.

Hancock, Mass.-N.Y. USGS quadrangle

Latitude: $42^{\circ}36'21''$ Longitude: $73^{\circ}17'12''$

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	State Route 43 and utilities	1217

Geologic Conditions: The left abutment is gravel. The right abutment is gravel, 5 to 10 feet thick, underlain by limestone bedrock. Depth to bedrock in the foundation is estimated to be about 10 feet. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Borrow material for dam construction was located near the site.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0403

Location: On Hopper Brook about 2500 feet upstream from Hopper Road in Williamstown, Massachusetts

Williamstown, Mass.-Vt. USGS quadrangle

Latitude: $42^{\circ}39'42''$ Longitude: $73^{\circ}12'45''$

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Bressett Road and utilities	925
	House and barn	955
	House	958
	2 houses	960
	House	970
	House	975
	House	980
	House	1000
	Barn	1005
	House	1015

Geologic Conditions: The right abutment is a gravel terrace. The left abutment is gravel and may be shallow to bedrock at the higher elevations. Depth to bedrock in the foundation is estimated to be less than 15 feet. Waterholding capabilities appear to be poor. Leakage can be expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0404

Location: On the East Branch of the Green River about 1000 feet upstream from its confluence with the Green River in New Ashford, Massachusetts.

Williamstown, Mass.-Vt. USGS quadrangle

Latitude: $42^{\circ}37'33''$ Longitude: $73^{\circ}13'24''$

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	House, barn and garage	1080
	House, 2 barns and garage	1090
	Royce Road	1114

Geologic Conditions: Both abutments are schistose bedrock except for a small gravel terrace on the left abutment. Bedrock outcrops in the stream-bed. Waterholding capabilities appear to be good. Borrow material for dam construction may be scarce.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0405

Location: On the Green River about 450 feet upstream from Ingraham Road in New Ashford, Massachusetts

Cheshire, Mass. USGS quadrangle

Latitude: $42^{\circ}36'05''$ Longitude: $73^{\circ}14'14''$

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Ingraham Road and utilities	1270
	House	1300

Geologic Conditions: Both abutments are thin glacial till underlain by limey schist and limestone bedrock. Depth to bedrock in the foundation is estimated to be less than 15 feet. Waterholding capabilities appear to be fair to good. There may be leakage through bedrock in the foundation. Borrow material for dam construction was not located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0406

Location: On the East Branch of the Green River about 100 feet upstream from Greylock Road in New Ashford, Massachusetts.

Cheshire, Mass. USGS quadrangle

Latitude: $42^{\circ}35'46''$ Longitude: $73^{\circ}12'59''$

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Bowers Road	1548

Geologic Conditions: Both abutments are thin glacial till underlain by schist bedrock. Bedrock is exposed in the brook. Waterholding capabilities appear to be fair to good. There may be leakage through foundation bedrock. Borrow material for dam construction was located near the site. Sufficient quantities may not be available on-site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

SUBWATERSHED-GREEN RIVER

BENEFICIAL POOL	* EMERGENCY SPILLWAY	* DESIGN	* DAM	* SAFE
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12
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87	87	87	87</	

SITE-HU-0401
SITE RATING (3) DA= 8.79 SQ MI = 5626 AC USGS QUAD-BERLIN
STREAM WATER QUALITY (8) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 8.30 IN, PEAK FLOW = 2477 CFS
LATITUDE 42-38-33 LONGITUDE 73-16-06

968.9	100	0.2	17050	26	65830	18.9	*	968.9	†	170	0.4	10010	*	983.5	59	*	991.0	41	189	*	0.49
977.8	422	0.8	4860	47	43600	27.7	*	977.8	†	492	1.1	4160	*	991.8	77	*	999.1	49	293	*	1.21
988.9	1066	2.3	2050	68	32290	38.9	*	988.9	†	1137	2.4	1930	*	999.5	106	*	1005.4	55	392	*	2.08
993.0	1388	3.0	1650	81	28220	43.0	*	993.0	†	1459	3.0	1570	*	999.9	108	*	1003.8	54	366	*	2.42

SITE-HU-0402
DA= 2.87 SQ MI = 1837 AC
USGS QUAD-HANCOCK
LATITUDE 42-36-21 LONGITUDE 73-17-12

SITE RATING (3)	STREAM WATER QUALITY (B)	100-YR PRIN	SPHY	DESIGN	STORM	RUNOFF = 8.30 IN,	PEAK FLOW = 888 CFS								
1164.5	0	0.0	6	9.5 *	1203.3 E	1159	7.6	770 *	1205.6	63 *	1212.0	57	258 *	*****	
1174.4	100	0.7	14	60800	19.4 *	1174.4 T	123	0.8	7140 *	1187.3	33 *	1192.0	37	80 *	0.32
1187.9	405	2.5	34	38550	32.9 *	1187.9 T	428	2.8	3040 *	1202.5	59 *	1212.3	57	261 *	0.74
1201.1	1016	6.6	58	30420	46.2 *	1201.1 T	1039	6.8	1690 *	1213.9	74 *	1219.6	65	361 *	1.25
1210.8	1627	10.6	70	26420	55.8 *	1210.8 T	1650	10.8	1120 *	1216.6	77 *	1219.9	65	366 *	1.66
1212.5	1748	11.3	72	26040	57.5 *	1212.5 T	1771	11.6	1060 *	1217.1	78 *	1220.1	65	375 *	1.71

SITE-HU-0403	DA= 4.74 SQ MI = 3034 AC	USGS QUAD-WILLIAMSTOWN	LATITUDE 42-39-42	LONGITUDE 73-12-45
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SITE RATING	(3)	STREAM WATER QUALITY (B)	100-YR PRIN	SPWY DESIGN	STORM	RUNOFF = 8.30 IN, PEAK FLOW = 1466 CFS	*							
935.1	0	0.0	5	15.2 *	986.1 T	1049	4.1	3680 *	997.0	49 *	1007.8	88	759 *	*****
948.0	100	0.4	11	28.0 *	948.0 T	138	0.5	11610 *	961.9	20 *	969.0	49	176 *	0.39
970.0	500	2.0	26	50.0 *	970.0 T	538	2.0	6290 *	984.8	37 *	992.3	72	452 *	1.04
993.0	1299	5.1	45	73.0 *	993.0 T	1337	5.3	2460 *	1006.0	56 *	1012.0	92	865 *	1.80
1012.5	2343	9.3	62	92.5 *	1012.5 T	2380	9.3	1780 *	1017.1	66 *	1020.1	100	1087 *	2.55

NOTES - (1) COSTS ARE BASED ON 1974 S.C.S. DESIGN CRITERIA AND COST DATA.

- (2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
- (3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
- (4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
- (5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

*** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

38

STUDY AREA-HUDSON

SUBWATERSHED-GREEN RIVER

BENEFICIAL POOL														EMERGENCY SPILLWAY														DESIGN * HIGH WATER *														DAM														SAFE YIELD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
ELEV	STORAGE	AC FT	IN	COST/ PER AC	SURF AC	DEPTH AT DAM	CREST ELEV	STORAGE AT CREST	COST PER AC	STORM	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	DESIGN	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NOTES - (1) COSTS ARE BASED ON 1974 S.C.S. DESIGN CRITERIA AND COST DATA.

(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.

(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE

(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.

(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **



LEGEND

- WATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING POND OR RESERVOIR

Source—U.S.G.S. Quad Sheets
Berlin, Mass.-New York — 1960
Cheshire, Mass.—1959
Hancock, Mass.-New York—1960
Williamstown, Mass.—1960

GREEN RIVER (HU-04) HUDSON STUDY AREA

MASSACHUSETTS
EXISTING AND POTENTIAL RESERVOIR SITES
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

HUDSON STUDY AREA

SITE DATA FOR

Subwatershed HU-05, Kinderhook Creek

The Kinderhook Creek subwatershed covers about 13,800 acres in Hancock and Lanesborough in Berkshire County.

The main stream in the subwatershed is Kinderhook Creek which originates in Hancock and flows southwesterly to the New York state line. There are also a number of small streams which form in the mountains of the subwatershed and flow west to New York State.

Elevations in the subwatershed range from a high of 2400 feet in the mountains to a low of about 950 feet on Kinderhook Creek at the New York line.

Four potential reservoir sites and two existing reservoirs were studied.

POTENTIAL SITE HU-0501

Location: On Kinderhook Creek about 700 feet upstream from Whitman Road in Hancock, Mass.

Hancock, Mass.-N. Y. USGS quadrangle

Latitude: 42°34'42" Longitude: 73°17'45"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	State Route 43 and	1245
	utilities	

Geologic Both abutments are well graded gravels or silty gravels.
 Conditions: Depth to bedrock in the foundation is estimated to be about 30 feet. Bedrock is probably limestone or limey schist. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Previous borrow material for dam construction was located near the site; impervious material was not located.

Engineering Preliminary designs indicate that a concrete drop structure
 Notes: emergency spillway may be required at this site.

POTENTIAL SITE HU-0502

Location: On Kinderhook Creek about 2400 feet upstream from Brodie Mountain Road in Hancock, Massachusetts.

Hancock, Mass.-N. Y. USGS quadrangle

Latitude: 42°33'48" Longitude: 73°18'04"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Barn	1225

Geologic Conditions: The right abutment is terrace gravel. The left abutment is thin terrace gravel underlain by limestone bedrock. Depth to limestone bedrock in the foundation is estimated to be about 10 feet. Waterholding capabilities appear to be poor. Leakage is expected through the foundation and both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0503

Location: On Kinderhook Creek about 1800 feet upstream from Potter Mountain Road in Hancock, Massachusetts

Hancock, Mass.-N. Y. USGS quadrangle

Latitude: 42°32'43" Longitude: 73°18'44"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	House and garage	1080

Geologic Conditions: Both abutments and the foundation are terrace gravels. Depth to limestone bedrock in the foundation is unknown. The bedrock is probably limestone which is locally cavernous. Waterholding capabilities appear to be poor. Leakage is expected through both of the abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0504

Location: On an unnamed tributary to Wyomanock Creek, about 3300 feet upstream from State Route 22 in New Lebanon, New York. About 80 percent of the pond area is in Massachusetts.

Pittsfield West, Mass.-N. Y. USGS quadrangle

Latitude: $42^{\circ}29'51''$ Longitude: $73^{\circ}21'35''$

Facilities Facility
Affected: None below elevation 1167

Geologic Both abutments are glacial till and are shallow to bedrock.
Conditions: Depth to bedrock in the foundation is estimated to be about 15 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering The right abutment is recommended for the excavated emergency
Notes: spillway location.

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-HUDSON										SUBWATERSHED-KINDERHOOK CREEK									
BENEFICIAL POOL					EMERGENCY SPILLWAY					DESIGN					DAM				
ELEV	STORAGE	PER	COST	COST/	DEPTH	CREST	STORAGE	COST	PER	ELEV	AREA	TOP	FILL	PERCENT	AT	YIELD	SAFE		
(MSL)	AC FT	IN	(\$)	(AC)	(FT)	TYPE	AT	AC FT	IN	(MSL)	(AC)	(MSL)	CY	CHANCE	95				
DA= 0.88 SQ MI = 563 AC USGS QUAD-PITTSFIELD WEST																			
LATITUDE 42-29-51 LONGITUDE 73-21-35																			
RUNOFF = 8.30 IN, PEAK FLOW = 272 CFS																			
SITE-HU-0504																			
SITE RATING (1)																			
1122.0	0	0.0	3	2.0	* 1139.4	E	303	6.5	860	* 1141.6	34	* 1145.8	26	41	*	*****	*****		
1131.3	100	2.0	18	17800	11.3	* 1141.8	E	385	8.2	840	* 1144.1	36	* 1148.3	28	50	*	0.20		
1138.8	279	5.9	30	13020	18.7	* 1145.3	E	508	10.8	770	* 1147.6	40	* 1151.3	31	64	*	0.36		
1148.8	637	13.6	41	12960	28.7	* 1153.3	E	836	17.7	630	* 1155.8	47	* 1159.0	39	107	*	0.57		
1156.8	994	21.2	48	13770	36.8	* 1161.3	E	1229	26.2	540	* 1163.6	54	* 1167.0	47	165	*	0.69		
1160.4	1173	25.0	52	14410	40.4	* 1164.9	E	1426	30.4	520	* 1167.1	57	* 1170.4	50	194	*	0.73		

NOTES - (1) COSTS ARE BASED ON 1974 S.C.S. DESIGN CRITERIA AND COST DATA.

- (2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
- (3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
- (4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
- (5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

*** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. ***

EXISTING SITE HU-0510 (Starobin Pond)

Location: On Kinderhook Creek at Whitman Road in Hancock, Massachusetts.

Hancock, Mass.-N. Y. USGS quadrangle

Surface Elevation	Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area	
			(Acres)	(Sq. Mi.)
1244	15	10	1028	1.61

Potential for Expansion: Please refer to Site Data and Design Summary Table for Potential Site HU-0501 which is located about 500 feet upstream.

Remarks: The dam is the Whitman Road embankment. The principal spillway is a 42-inch corrugated metal culvert with rock riprap around the inlet.

Ownership and Use: The pond is owned by Dr. Joseph R. Starobin and is used for fish and wildlife habitat.

EXISTING SITE HU-0511 (Berry Pond)

Location: On Berry Pond Creek at Berrypond Circuit Road in Hancock, Massachusetts.

Hancock, Mass.-N. Y. USGS quadrangle

Surface Elevation	Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area	
			(Acres)	(Sq. Mi.)
2070	8	10	64	.10

Potential for Expansion: The small drainage area limits expansion potential. The pool area is already large in relation to the size of the drainage area.

Remarks: The dam is formed by the embankment of Berrypond Circuit Road. The principal spillway is a 6-foot wide concrete and stone arch culvert.

Ownership and Use: The pond is owned by the Commonwealth of Massachusetts, Department of Environmental Management and is used for recreation.

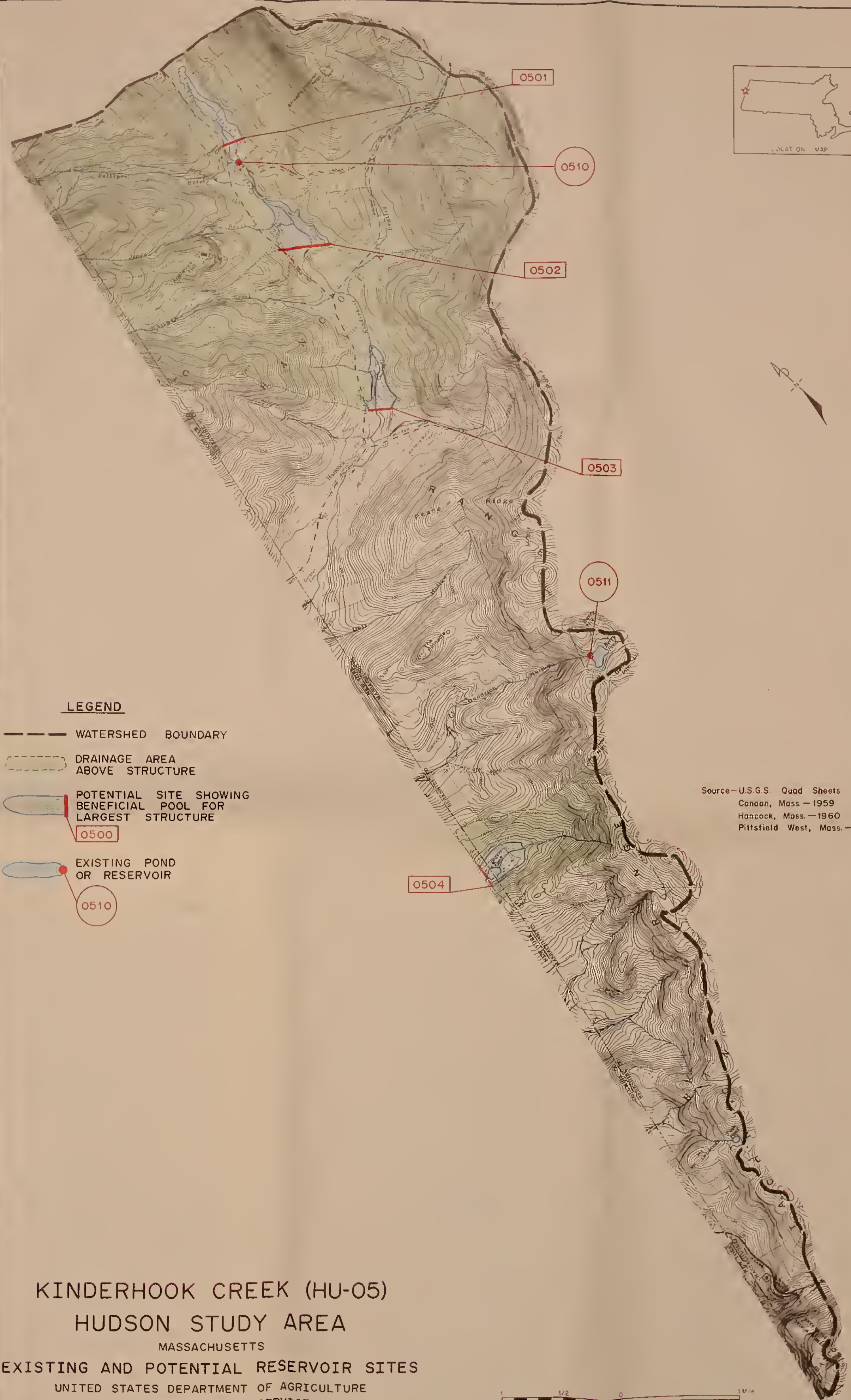
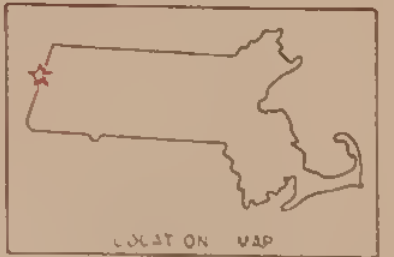


HU-0510
STAROBIN POND



HU-0511
BERRY POND





Source—U.S.G.S. Quad Sheets
Canaan, Mass.—1959
Hancock, Mass.—1960
Pittsfield West, Mass.—1959

KINDERHOOK CREEK (HU-05)

HUDSON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



HUDSON STUDY AREA

SITE DATA FOR

Subwatershed HU-06, Bashbish Falls

The Bashbish Falls subwatershed covers about 9,500 acres in the town of Mount Washington, Berkshire County.

Ashley Hill Brook, City Brook, Guildler Brook, and Wright Brook combine to form Bashbish Brook which flows westerly to New York State.

Elevations in the subwatershed range from a high of about 2600 feet on Mount Everett to about 850 feet on Bashbish Brook at the New York state line.

Six potential reservoir sites and two existing reservoirs were studied.

POTENTIAL SITE HU-0601

Location: On Guildler Brook about 150 feet upstream from Cross Road in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

Latitude: $42^{\circ}05'57''$ Longitude: $73^{\circ}27'37''$

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	Garage	1605
	2 houses and garage	1607
	Greenhouse and swimming pool	1607

Geologic Conditions: Both abutments are shallow ground moraine underlain by pre-Cambrian gneiss. Depth to gneiss bedrock in the foundation is estimated to be about 5 to 10 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was not located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0602

Location: On City Brook about 1600 feet upstream from West Street in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

Latitude: 42°05'35" Longitude: 73°27'40"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	East Street and utilities	1540
	House	1550
	House	1560
	House and garage	1565
	2 houses	1570
	House	1580

Geologic Conditions: Both the abutments are shallow ground moraine underlain by pre-Cambrian gneiss. Depth to gneiss bedrock in the foundation is estimated to be less than 15 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was not located near the site.

Engineering Notes: Preliminary structure designs indicate that a concrete chute emergency spillway may be required at this site.

POTENTIAL SITE HU-0603

Location: On City Brook about 1400 feet upstream from East Street in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

Latitude: 42°05'19" Longitude: 73°27'05"

Facilities	<u>Facility</u>	<u>Elevation</u>
Affected:	East Street and utilities	1595
	House and garage	1603

Geologic Conditions: Both abutments are shallow ground moraine underlain by gneiss bedrock. Depth to bedrock in the foundation is estimated to be about 5 to 10 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was not located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0604

Location: On City Brook about 2700 feet upstream from East Street in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

Latitude: 42°05'14" Longitude: 73°26'53"

Facilities Facility

Affected: None below elevation 1660

Geologic Conditions: Both abutments are shallow ground moraine underlain by pre-Cambrian gneiss. Depth to gneiss bedrock in the foundation is estimated to be about 10 to 20 feet. Waterholding capabilities appear to be good. There may be leakage through the foundation. Borrow material for dam construction was not located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0605

Location: On Lee Pond Brook about 1500 feet upstream from East Street in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

Latitude: 42°04'39" Longitude: 73°28'00"

Facilities Facility

Affected: East Street and utilities Elevation

1655

Geologic Conditions: Both abutments are moraine or glacial till and are shallow to bedrock. Depth to gneiss bedrock in the foundation is estimated to be less than 15 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was not located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

POTENTIAL SITE HU-0606

Location: On Ashley Hill Brook about 7400 feet upstream from its confluence with Lee Pond Brook in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

Latitude: $42^{\circ}04'35''$ Longitude: $73^{\circ}29'14''$

Facilities Facility

Affected: None below elevation 1847

Geologic Both abutments are shallow ground moraine underlain by gneiss
Conditions: bedrock. Depth to pre-Cambrian gneiss bedrock in the foundation is estimated to be about 10 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was not located near the site.

Engineering The emergency spillway should be located on the abutment that
Notes: would require the least rock excavation.

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-HUDSON										SUBWATERSHED-BASHBISH FALLS									
BENEFICIAL POOL																			
ELEV	STORAGE	AC FT	IN	COST/	DEPTH	CREST	STORAGE	COST	DESIGN	EMERGENCY	SPILLWAY	DESIGN	HIGH WATER	DAM	SAFE	YIELD	FILL	PERCENT	CHANGE
(MSL)	AC FT	IN	AC	PER	AT	ELEV	AT CREST	PER	AC FT	IN	AC FT	(MSL)	(AC)	(MSL)	FT	(MGD)	(1000)		
DA= 1.19 SQ MI = 762 AC										LATITUDE 42-05-57 LONGITUDE 73-27-37									
STREAM WATER QUALITY (B)										RUNOFF = 8.10 IN, PEAK FLOW = 359 CFS									
SITE-RATING (1)																			
1586.1	0	0.0	4	5750	20	28770	13.2	4.1	1607.1	E	507	8.0	1030	53	1609.0	53	1613.5	32	70
1595.3	100	1.6	20	28770	13.2	1607.8	E	541	8.5	1060	56	1610.1	56	1613.6	32	71	0.23		
1600.9	244	3.8	32	21050	18.9	1611.4	E	732	11.5	930	66	1613.1	66	1617.3	35	97	0.39		
1607.9	533	8.3	50	15900	25.9	1614.4	E	930	14.7	850	79	1616.6	79	1619.8	38	118	0.60		
1612.5	795	12.5	64	15210	30.5	1612.5	T	804	12.7	1210	81	1617.1	81	1620.1	38	126	0.74		
DA= 3.06 SQ MI = 1958 AC										LATITUDE 42-05-35 LONGITUDE 73-27-40									
STREAM WATER QUALITY (B)										RUNOFF = 8.10 IN, PEAK FLOW = 924 CFS									
SITE-RATING (1)																			
1516.1	0	0.0	3	13030	10	130520	34.3	16.2	1559.8	T	677	4.1	2640	50	1571.4	50	1579.4	79	230
1534.3	100	0.6	10	13030	10	130520	34.3	16.2	1559.8	T	124	0.8	10470	22	1548.5	22	1554.4	54	90
1554.6	489	3.0	30	52470	30	52470	54.6	54.6	1554.6	T	513	3.0	3020	44	1567.0	44	1572.8	73	185
1573.6	1266	7.8	53	42520	53	42520	73.6	73.6	1573.6	T	1290	7.8	1760	87	1587.1	87	1594.1	94	359
1585.6	2043	12.5	82	27330	82	27330	85.6	85.6	1585.6	T	2068	12.7	1080	96	1590.0	96	1593.0	93	347
DA= 1.15 SQ MI = 736 AC										LATITUDE 42-05-19 LONGITUDE 73-27-05									
STREAM WATER QUALITY (B)										RUNOFF = 8.10 IN, PEAK FLOW = 347 CFS									
SITE-RATING (1)																			
1574.9	0	0.0	2	6120	12	51450	27.5	9.8	1609.1	E	461	7.5	980	33	1611.6	33	1616.4	51	87
1592.5	100	1.6	12	6120	12	51450	27.5	9.8	1609.1	E	109	1.7	5610	25	1604.1	25	1611.6	47	68
1605.1	339	5.5	26	23760	26	23760	40.2	40.2	1617.6	E	763	12.3	810	44	1620.1	44	1624.1	59	127
1619.1	817	13.2	43	19540	43	19540	54.1	54.1	1627.6	E	1261	20.6	670	64	1629.8	64	1633.8	69	199
1632.1	1533	25.0	68	18500	68	18500	67.1	67.1	1632.1	T	1543	25.2	810	76	1637.0	76	1640.0	75	257

NOTES - (1) COSTS ARE BASED ON 1974 S.C.S. DESIGN CRITERIA AND COST DATA.
 (2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
 (3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
 (4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
 (5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE HU-0610 (Guilder Pond)

Location: On Guilder Brook at Mount Everett Road in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N.Y. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
2042	16	5	150	0.25

Potential for Expansion: The small drainage area limits expansion potential. The pool is already large in relation to the size of the drainage area.

Remarks: The dam is an earthfill structure about 100 feet long. The principal spillway is a 30-foot long concrete weir located on the right abutment.

Ownership and Use: The pond is owned by the Commonwealth of Massachusetts, Department of Environmental Management and is used for recreation.

EXISTING SITE HU-0611 (Hunts Pond)

Location: On Lee Pond Brook about 1600 feet downstream from East Street in Mount Washington, Massachusetts.

Bashbish Falls, Mass.-Conn.-N. Y. USGS quadrangle

<u>Surface Elevation</u>	<u>Surface Area (Acres)</u>	<u>Height of Dam (Ft.)</u>	<u>Drainage Area (Acres)</u>	<u>(Sq. Mi.)</u>
1600	5	15	574	.90

Potential for Expansion: Raising the pool level by twenty feet would affect East Street. A fifty-acre pool would be created.

Remarks: The dam is an earthfill structure about 100 feet long. The principal spillway is a 40-foot long concrete weir having a maximum head of 3 feet and provisions for 2 feet of stoplogs and flashboards.

Ownership and Use: The pond is owned by the town of Mount Washington and is used for recreation.



Site HU-0610 (Guilder Pond)



Site HU-0611 (Hunts Pond)

LEGEND

WATERSHED BOUNDARY

DRAINAGE AREA
ABOVE STRUCTURE

POTENTIAL SITE SHOWING
BENEFICIAL POOL FOR
LARGEST STRUCTURE

0600

EXISTING POND
OR RESERVOIR

0610



BASHBISH FALLS (HU-06)

HUDSON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Source — U.S.G.S. Quod Sheets
Boshbish Folls, Moss. — 1958
Egremont, Mass. — 1958

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

<u>City or Town</u>	<u>Site No.</u>	<u>Narrative Information</u> <u>Page</u>	<u>Design Summary</u> <u>Page</u>
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Cheshire	0101	9	16
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	0103	10	16
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	0109	13	18
	0110	14	
	0120	20	19
Clarksburg	0202	22	24
	0203	26	
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Hancock	0402	34	37
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Lanesborough	0111	15	19
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Mount Washington	0601	45	49
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	0604	47	50
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	0606	48	50
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MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

<u>City or Town</u>	<u>Site No.</u>	<u>Narrative Information</u> <u>Page</u>	<u>Design Summary</u> <u>Page</u>
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	0211	27	
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Savoy	0205	23	25
Williamstown	0201	21	24
	0214	29	
	0401	33	37
	0403	34	37
Windsor	0106	12	17
	0107	12	18

RIVER BASIN STUDY AREAS

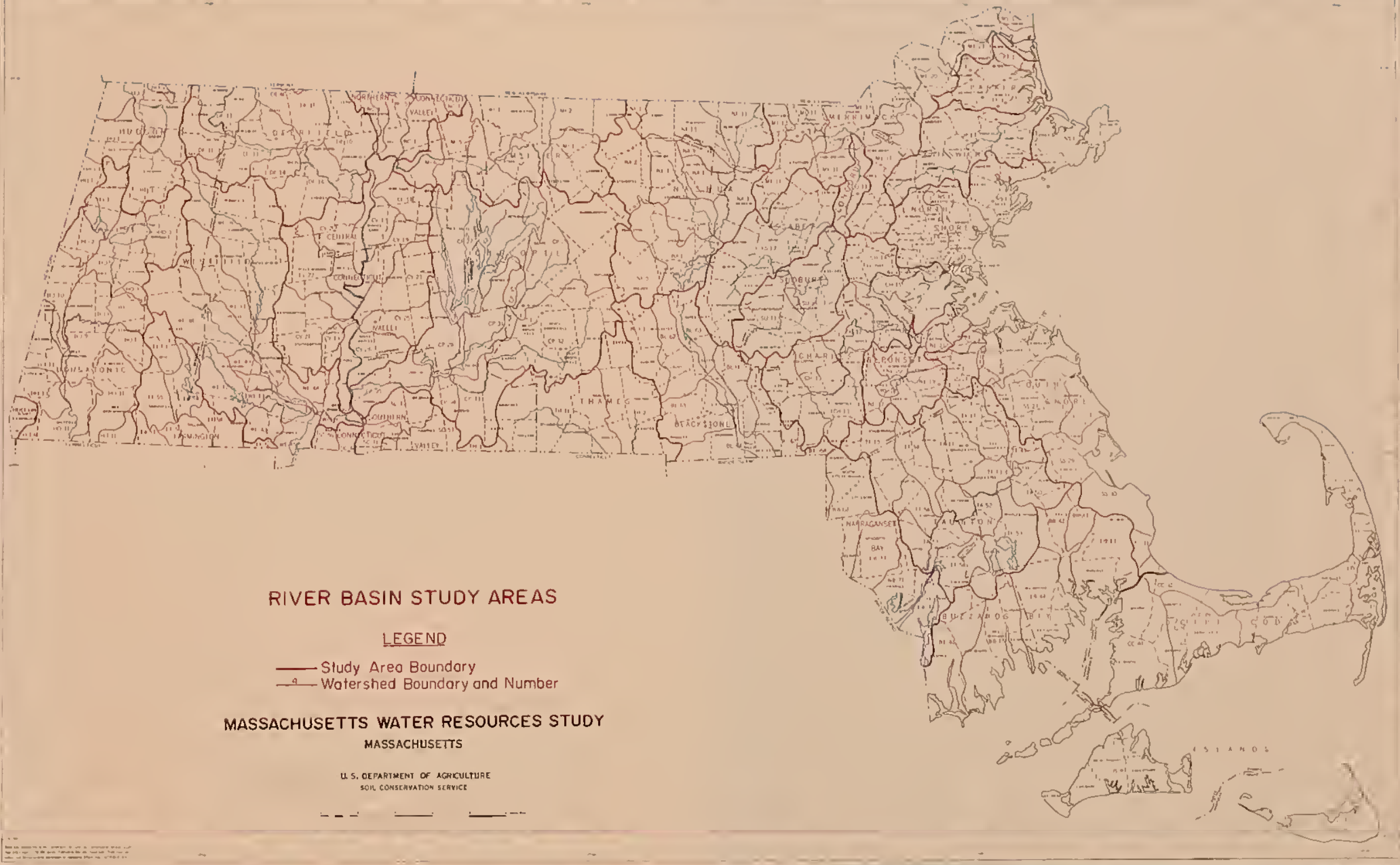
LEGEND

- Study Area Boundary
- Watershed Boundary and Number

MASSACHUSETTS WATER RESOURCES STUDY MASSACHUSETTS

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

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